

A NEW SPECIES OF *HOCKERIA* WALKER FROM MEXICO (HYMENOPTERA: CHALCIDIDAE)

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Abstract.—*Hockeria burdicki* Halstead, NEW SPECIES, is described and illustrated based on material from Mexico, and is compared to closely related congeneric species. This wasp is the tenth species of *Hockeria* described from the Nearctic region.

Key Words.—Insecta, Hymenoptera, Chalcididae, *Hockeria*, Mexico.

Wasps of the genus *Hockeria* Walker are distributed worldwide and the genus contains about thirty-five described species. Hosts are summarized by Halstead (1990) and include antlion and owlfly larvae (Neuroptera), elasmid and tenthrinid pupae (Hymenoptera), free-living Strepsiptera, dipteran pupae and, commonly, lepidopteran larvae and pupae. In the Nearctic region, three economically important lepidopterous pests are parasitized by *Hockeria* spp.: the Nantucket Pine Tip Moth (*Rhyacionia frustrana* (Comstock)), Ponderosa Pine Tip Moth (*Rhyacionia zozana* (Kearfott)), and the Western Grapeleaf Skeletonizer (*Harrisina brillians* Barnes and McDunnough).

A new species of *Hockeria* is described from Mexico; the tenth for the Nearctic region—exclusive of Neotropical Mexico (Peck 1963, Burks 1979, De Santis 1979, Halstead 1990). No biological or host information is known and its potential as a biological control agent is, therefore, unassessed.

MATERIALS AND METHODS

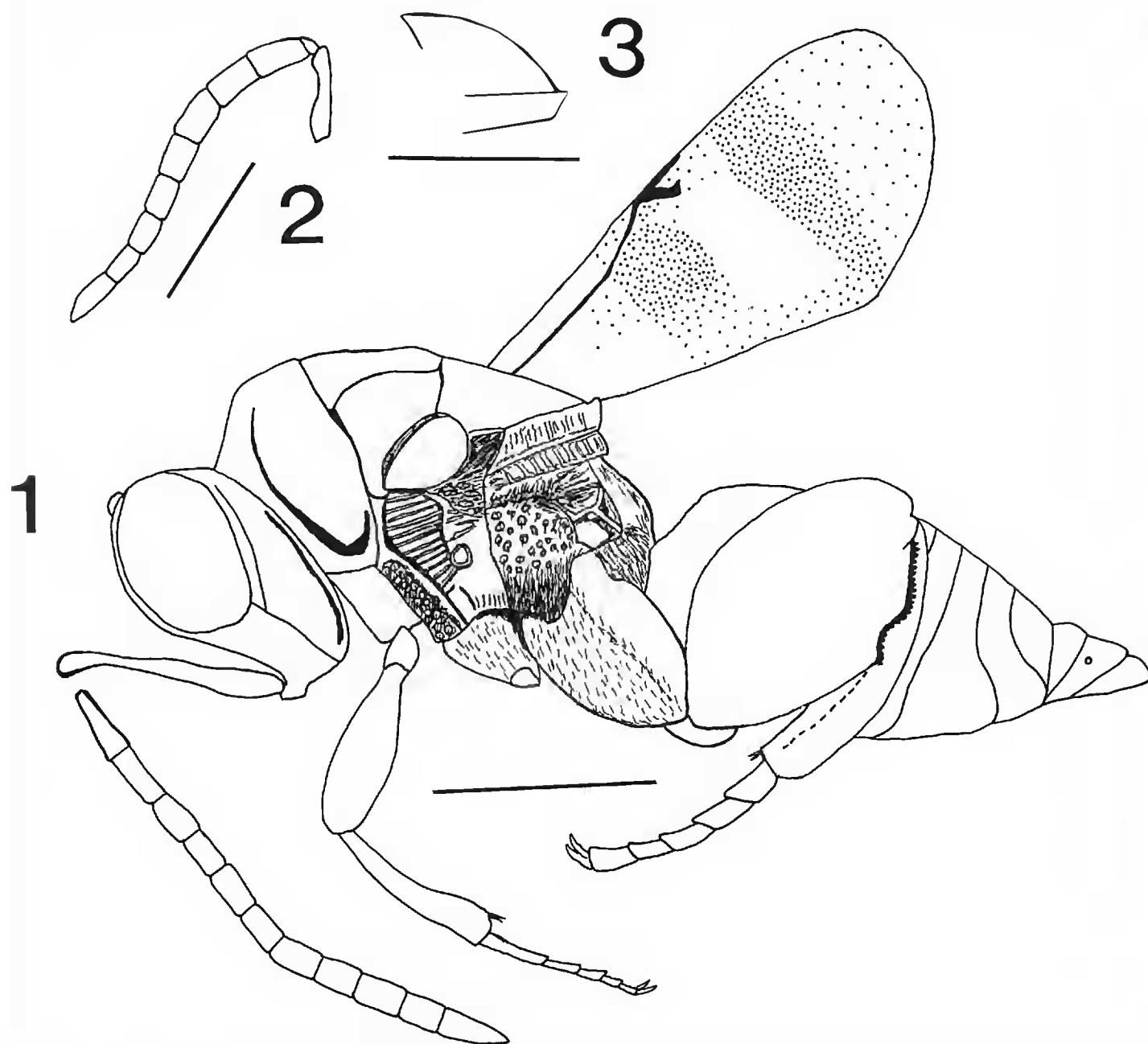
Specimens were discovered while sorting and identifying material for biosystematic studies on chalcidid wasps. The specimens were compared to reference material of the other Nearctic *Hockeria* species. Drawings were made using a microscope drawing-tube. Measurements were made with a micrometer grid. Morphological terminology follows Gibson, Huber, & Woolley (1997). Types are deposited in California Academy of Sciences, San Francisco (CAS) and the United States Museum of Natural History, Washington, D.C. (USNM).

HOCKERIA BURDICKI HALSTEAD, NEW SPECIES

(Figs. 1–3)

Types.—Holotype female: MEXICO. JALISCO: Chamela Research Station, 20 Aug 1986, M. Sanchez, Malaise trap (CAS). Allotype male: as above but 26 Sep–8 Oct 1985, Parker & Griswold (CAS). Paratypes: 1 female and 7 males, same locale as holotype; 1 female, 20 Aug 1986, M. Sanchez, Malaise trap (USNM); 3 males, 26 Sep–8 Oct 1985, Parker & Griswold (CAS); 1 male, 15–24 Apr 1986, F. D. Parker (CAS); 2 males, 13 May 1986, M. Sanchez, Malaise trap (CAS); 1 male, 17 Oct 1985, Malaise trap (USNM).

Description.—Female (holotype, Fig. 1). *Length.* 5.0 mm. *Color.* Black with scape, pedicel, pronotum, mesoscutum except anterior margin and lateral lobe, axilla, tegula, scutellum, fore- and middle coxa, fore- and middle femur, apices of tibia, tarsi, and ventral margin of gastral terga, orange-red. *Head.* Sculptured with dense umbilicate setigerous punctures; setae pale; integument polished. Scrobal



Figures 1–3. *Hockeria burdicki*, NEW SPECIES (lateral views). Figure 1. Female habitus. Figure 2. Antenna, male. Figure 3. Scutellum, male. Scale lines 1.0 mm.

cavity deeply concave, transversely carinate. Scape reaching anterior ocellus. Malar sulcus reaching to near ventral margin of eye. Postorbital carina curving along posterior margin of eye to near apex of occiput. *Mesosoma*. Thorax slightly convex in lateral view, sculpture and integument like head. Mesopleuron, anterior to femoral depression, transversely carinate. Metapleuron with dorsal half punctate; ventral half rugose, densely setose. Scutellum with posterior margin rounded, with two minute upturned teeth, and the punctures separated from each other by $0.16\text{--}0.25 \times$ puncture diameter. Propodeum with submedian longitudinal carinae and a couple of vague transverse carinae between these, elsewhere carinately reticulate with surface between carinae shiny and slightly rugose. *Hind femur*. Large and oval, $1.6 \times$ as long as high (lateral view); integument coriaceous; setose. *Forewing*. Clouded from near apex of submarginal vein to apex of wing except for clear rectangular area below stigma. *Gaster*. In lateral view oval, $2.5 \times$ as long as high, apex subaccuminate. Tergum 1 $0.40 \times$ length of gaster in dorsal view, smooth and polished except for lateral coriaceous and setose area. Other terga coriaceous except for polished medial area of tergum 2.

Male (Allotype).—*Length*. 4.5 mm. *Color*. Black with apices of tibia, tarsi, and ventral margins of metasomal terga, orange. *Forewing*. Evenly clouded, and with an orangish tint. *Body*. Like female except as noted for color and the following: antenna robustly filiform (Fig. 2), flagellomeres $1.5 \times$ as long as wide; apex of scape not reaching anterior ocellus, separated from it by $1 \times$ ocellar diameter; scutellum convex (Fig. 3); tergum 1 sublaterally polished, punctate medially, remainder and other terga coriaceous.

Diagnosis.—*Hockeria burdicki* (both males and females) is distinguished from

other New World *Hockeria* by the large, oval hind femur which is $1.6 \times$ as long as high. In other Nearctic *Hockeria*, the hind femur is at least $2 \times$ as long as high. Females most closely resemble *H. tenuicornis* (Girault), and will key out to that species in Halstead's (1990) key to species. Females of *H. burdicki* are distinguished from those of *H. tenuicornis* by their large, oval hind femur, and the forewing disc with a rectangular-shaped, unclouded area rather than an elliptical-shaped area. Other distinguishing characters for *H. burdicki* females include the black body color, the elongate abdomen with the apex pointed, tergum 1 polished dorsally, a clouded pattern in the forewing, and the relatively large body size. Males most closely resemble *H. unipunctatipennis* (Girault), and will key out to that species in Halstead's (1990) key to species. Males of *H. burdicki* are distinguished from those of *H. unipunctatipennis* by their large, oval femur, their black rather than orange femora, and their small rather than large and protruding inter-antennal lobe. Other distinguishing characters for *H. burdicki* males include the black body color, the punctate and coriaceous tergum 1 (dorsal view), the relatively large body size, flagellomeres $1.5 \times$ as long as wide (Fig. 2), convex scutellum (Fig. 3), and the clouded forewing which has an orangish tint. Only the male of *H. unipunctatipennis* has a similarly colored forewing.

Variation.—Male. Length 4.5 to 5.4 mm. Female. One paratype with flagellomere 1, mesepimeron, and dorsal half of mesopleuron, orange.

Distribution.—Mexico, Jalisco.

Host.—Unknown.

Etymology.—The specific name, a noun in the genitive case from a modern personal name, is in honor of Donald J. Burdick—a friend and mentor in entomology.

Material Examined.—This species is known only from the type specimens.

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